

# **FACT SHEET FOR STATE WASTE DISCHARGE PERMIT NO. ST-9110**

## **Smucker Fruit Processing Company**

### **SUMMARY**

The Smucker Fruit Processing Plant is seeking re-issuance of the State Wastewater Discharge Permit for its plant in Grandview, WA. The existing permit was issued in 1999. Smucker's Grandview plant produces various fruit concentrates, primarily from grapes, cherries, apples, and berries.

The plant is a wholly owned subsidiary of J.M. Smucker, Inc. The fruit concentrate produced at the Grandview plant is shipped to other company facilities to make "Smucker" products.

The plant significantly increased production in the 2004-2005 timeframe when the plant took on the production that had occurred at a Smucker's Oregon plant which was shut-down.

Smucker discharges its wastewater to the City of Grandview's Wastewater Treatment Facility. The City of Grandview Industrial Wastewater User Contract regulates wastewater discharges to the City's treatment facility. The Industrial Wastewater User Contract includes a Capacity Allocation, which is necessary to protect the City's Wastewater Treatment Facility from overloading.

The Capacity Allocation sets the contracted capacity for monthly loading of the wastewater's hydraulic flow, 5-day Biological Oxygen Demand (BOD<sub>5</sub>), and Total Suspended Solids (TSS). These Capacity Allocations also constitute the enforceable limits of this proposed permit.

The Smucker User Contract's Capacity Allocation has not been updated since 1999. Since the facility's production levels have increased significantly since 1999, the Capacity Allocation has been exceeded on a regular basis. The proposed permit requires that the contract be updated and included as Appendix A of the facility's updated Operating and Maintenance Manual.

Over the course of the existing permits, Smucker has not consistently complied with the State's permit limitations placed on the pH of its wastewater. The proposed permit contains a Compliance Schedule that requires the submittal of an Engineering Report followed by an implementation date for an upgrade to the pH neutralization system.

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## **INTRODUCTION**

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST-9110. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to the City of Grandview's Wastewater Treatment Facility (WWTF.) This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the State is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the State. Regulations adopted by the State include procedures for issuing permits and establish requirements which are to be included in the permit (Chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A--Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix D -- Response to Comments.

GENERAL INFORMATION	
Applicant	Smucker Fruit Processing Company
Facility Name and Address	Smucker Fruit Processing Company 100 Forsell Road Grandview, WA
Type of Facility:	Fruit Processing
Facility Discharge Location	Latitude: 46° 15' 25" N Longitude: 119° 54' 58" W (WGS84/NAD83)
Treatment Plant Receiving Discharge	City of Grandview Wastewater Treatment Facility
Contact at Facility and Responsible Official	Name: Randy Hecker Title: Plant Manager Address: P.O. Box 608 Grandview, WA 98930 Telephone #: (509) 882-1530 FAX # (509) 882-2212

## BACKGROUND INFORMATION

### DESCRIPTION OF THE FACILITY

Smucker discharges its wastewater to the City of Grandview Publicly Owned Treatment Works (POTW).

### History

The Smucker Company has been processing fruit in Washington State since 1935.

The Smucker Fruit Processing Company is the new name for the plant at Grandview since 2003. Prior to that, the facility operated using the name of its corporate parent, the J.M. Smucker Company.

In 2004, Smucker added a new evaporator that extended production capacity for its main products, fruit purees and fruit concentrates.

## **Industrial Processes**

The plant operates seven days per week, 50 weeks per year, 20 hours per day processing various varieties of fruit including grapes, cherries, apples, cranberries, and berries. During grape harvest, it operates 24 hours per day.

Fruits varieties processed, in order of tons processed each year include: 1) grapes, 2) strawberries, 3) cranberries, 4) apples, 5) cane-berries (raspberries, blueberries, etc.).

Processes involved are fruit juice extraction and concentration, and production of single strength puree. The fruit concentrate and puree is shipped in 50 gallon drums to other Smucker facilities to make the finished products for the "Smucker" line of fruit-based products.

Fresh fruit is dumped into a steel receiving hopper in the yard outside where the fruit is washed before being conveyed into the plant. The wash water is collected and pumped into the plant wastewater stream. Frozen fruit received in drums is dumped into a receiving station inside the plant and crushed through a macerator to break the frozen fruit.

Inside the plant, the fruit is disintegrated and treated with chemicals to depectinize it. The fruit liquid is then filtered through one of two cylindrical vacuum filters that utilize diatomaceous earth (DE) as the filter medium. The outside surface of the filter cake is continuously shaved away to expose a fresh surface. When the filter cake has shaved away to within 3/4 inch of the steel cylinder, filtering is stopped to clean and repack the filter. Washing the DE from the drum filter results in slurry inappropriate for discharge to the POTW. The waste DE slurry is passed through Sweco filters to separate the solids from the waste liquid. The expended DE is collected as solid waste, and spread as a soil amendment. The Permittee is required to acquire appropriate permits from Benton-Franklin and/or Yakima County Health Districts to regulate land application of DE and other solid wastes generated from the fruit processing.

After DE vacuum filtering, the juice is concentrated (4:1) and then receives a final "polish" by filtering through a 30 micron pressure filter. Stainless steel tanks are utilized to collect and reuse a portion of the concentrate water produced at the plant.

## **Treatment Processes**

A portion of the water evaporated during the fruit juice concentration is condensed and re-used for cleaning processes. Wastewater is routed through an outdoor trench drain and indoor floor drains to an outdoor pre-treatment facility located in the south east corner of the property.

A pH neutralization tank, located upstream from the concrete sedimentation basin, is utilized to adjust the pH of wastewater produced by evaporator cleaning. The main in-plant wastewater stream is directed through a rotary screen and then to a 10 foot deep concrete settling basin located in the south east corner of the property. The settling basin is drained and the sludge is cleaned out 2 times a year. These waste solids are land applied as soil amendment on agricultural land. The clarified wastewater flows out of the concrete settling basin and into a City of Grandview owned pH equalization sump where it is pH neutralized. From here, the wastewater is pumped to the City of Grandview sanitary sewer.

The City of Grandview's wastewater department collects composite wastewater samples twice weekly to determine BOD<sub>5</sub> and TSS loading. Grab sampling is utilized to determine the pH of the wastewater. Wastewater flow is monitored continuously with an ultra-sonic Doppler meter.

Precipitation falling on the paved fruit receiving area flows by gravity to the outdoor trench drain near the fruit receiving bin, which routes wastewater to the pre-treatment concrete settling basin. Precipitation has the potential to add an undetermined, yet no doubt significant volume to the wastewater hydraulic loading to the Grandview POTW.

## **PERMIT STATUS**

The existing permit for this facility was issued on November 19, 1999. The permit expired June 30, 2005. An application for permit renewal was received by the Department on January 25, 2005 and accepted by the Department on February 7, 2005. A Temporary State Waste Discharge Permit was issued May 13, 2005, with an effective date of July 1, 2005. This temporary permit consists of the previous written permit plus the application.

## **SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT**

The facility last received a compliance inspection without sampling on July 18, 2005.

During the history of the previous permit, the Permittee has not consistently achieved compliance with its loading limits based on Discharge Monitoring Reports (DMRs) submitted to the Department. For the period July 2002 through October 2005 the Permittee was out of compliance with the existing permit's:

- hydraulic loading limits 21 out of 39 months;
- BOD<sub>5</sub> loading limits 9 out of 39 months;
- TSS loading limits 13 out of 39 months.

This level of non-compliance is well beyond the 5 % tolerance level, which is the maximum considered acceptable by the Department. The Permittee is required in Special Condition S1. of the permit to renegotiate its Capacity Allocation with the City of Grandview.

The Permittee has also not consistently achieved compliance with its pH limits. There have been 92 separate days in the period from July 2002 through June 2005 of instances when the existing permit's pH limit was exceeded. This represents 7.7 percent of the days during this period. The Department will carefully consider taking an enforcement action should the exceedances in pH and monthly loading limits continue.

## WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge was reported in the permit application and in discharge monitoring reports. The monthly average wastewater discharge characterization for flow, BOD<sub>5</sub>, and TSS loading is presented in the table below. The characterization is compared with the 1999 Capacity Allocations.

**Table 1: Wastewater Characterization**

Month	Parameter	Monthly Average July 2002 -Oct. 2005	Capacity Allocation Permit Limits
January	Flow (MG/month)	1.023	1.65
	BOD <sub>5</sub> (lbs/month)	3,986	9,300
	TSS (lbs/month)	2,561	3,100
February	Flow (MG/month)	1.968	1.65
	BOD <sub>5</sub> (lbs/month)	5,631	8,700
	TSS (lbs/month)	2,081	2,900
March	Flow (MG/month)	1.461	1.65
	BOD <sub>5</sub> (lbs/month)	5,887	9,300
	TSS (lbs/month)	<b>3,565</b>	3,100
April	Flow (MG/month)	1.096	1.65
	BOD <sub>5</sub> (lbs/month)	2,684	9,000
	TSS (lbs/month)	935	3,000
May	Flow (MG/month)	<b>1.959</b>	1.2
	BOD <sub>5</sub> (lbs/month)	7,957	9,300
	TSS (lbs/month)	<b>4,138</b>	3,100
June	Flow (MG/month)	<b>1.670</b>	1.05
	BOD <sub>5</sub> (lbs/month)	7,818	9,000
	TSS (lbs/month)	2,463	3,000
July	Flow (MG/month)	1.279	1.65



Month	Parameter	Monthly Average July 2002 -Oct. 2005	Capacity Allocation Permit Limits
	BOD <sub>5</sub> (lbs/month)	8,520	9,300
	TSS (lbs/month)	1,174	3,100
	Flow (MG/month)	<b>1.980</b>	1.65
August	BOD <sub>5</sub> (lbs/month)	6,500	9,300
	TSS (lbs/month)	2,149	3,100
	Flow (MG/month)	<b>3.005</b>	1.8
September	BOD <sub>5</sub> (lbs/month)	<b>16,267</b>	9,000
	TSS (lbs/month)	<b>7,334</b>	3,000
	Flow (MG/month)	<b>7.550</b>	7.35
October	BOD <sub>5</sub> (lbs/month)	67,955	93,000
	TSS (lbs/month)	22,869	46,500
	Flow (MG/month)	1.982	3.6
November	BOD <sub>5</sub> (lbs/month)	6,261	60,000
	TSS (lbs/month)	5,300	15,000
	Flow (MG/month)	<b>1.610</b>	1.2
December	BOD <sub>5</sub> (lbs/month)	4,041	9,300
	TSS (lbs/month)	1,862	3,100
	Flow (MG/month)		

The 3-year, monthly loading averages formatted in **BOLD** exceeded the monthly loading limit.

### PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable methods of prevention, control and treatment (AKART) and not interfere with the operation of the POTW.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

### TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring all known, available and reasonable methods of prevention, control, and treatment of discharges to waters of the State (WAC 173-216-110).

## EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS

In order to protect the City of Grandview POTW from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, limitations for certain parameters are necessary. These limitations are based on local limits established by and for the City of Grandview POTW and codified in ordinance. Monthly capacity allocations given in the existing Schedule A are presented in Table 1 above.

### Flow, BOD<sub>5</sub>, and TSS Limits

Applicable limits for flow, biochemical oxygen demand (BOD<sub>5</sub>), and total suspended solids (TSS) are given in Schedule A -, Capacity Allocation Summary. This Capacity Allocation Summary is included in Smucker Industrial User Contract with the City of Grandview. The Schedule A gives maximum monthly allocations, **based on a daily rate**.

A letter dated April 15, 2005 from the City of Grandview's Wastewater Superintendent to the Department, clarified the way in which the City of Grandview interprets and utilizes the Schedule A allocations. The letter stated, "The City determines total Maximum Monthly Allocations by multiplying any of the Contracted Allocations - for any given month - by a factor of 30." Therefore, if any of the twice-weekly loading calculations (as reported on the Discharge Monitoring Reports) exceeds pounds per day or million gallons per day number given in Schedule A, it is not a permit violation. Only the total monthly loadings are utilized in determining compliance with the Capacity Allocation limits.

### pH Limits

The Grandview Municipal Code Title 13 Public Services, Chapter 12 Use of Public Sewers – Discharges has this provision:

#### 13.12.120 Penalties for certain discharges

*C. Any discharge of wastes from large industrial or commercial user having either:*

- 1. A gravity discharge of wastewater to the sewer system for an average over a 15-minute period within a 60-minute duration; or*

*2. A pumped discharge of wastewater to the sewer system of 25 percent of the pumped volume within a 60-minute period or for 25 percent of the pumping period within a 60-minute period;*

*of wastewater with a pH lower than five or higher than 11 or having any other corrosive property capable of causing damage or hazard to structures, equipment and personnel of the sewage works after June 1, 1997 shall be subject to a penalty. (Ord. 1488 § 1, 1997; Ord. 1429 § 2, 1995).*

The proposed permit will adopt this Part C of Chapter 13.12.120 for its pH limits, by reference for the Permittee's wastewater discharge. This specific ordinance is required to be included in the Operations and Maintenance (O&M) Manual as Appendix B. If the ordinance is modified during the course of the proposed permit's term, the revision is required to be placed in an updated O&M Manual.

#### **COMPARISON OF LIMITATIONS WITH THE EXISTING PERMIT ISSUED IN 1999**

As of the date this draft fact sheet was written, the facility continued to operate under the 1999 Schedule A- Capacity Allocation. Therefore the current limits are the same as the limits as existed when the 1999 permit was issued (see Table 1 for the existing limits). The facility has increased production significantly since then, and as a result exceedances of the Schedule A - Capacity Allocation limits have occurred on a regular basis.

#### **MONITORING REQUIREMENTS**

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110).

The monitoring schedule is detailed in the proposed permit under Special ConditionS2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

## **OTHER PERMIT CONDITIONS**

### **REPORTING AND RECORDKEEPING**

The provisions of Special Condition S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110 and 40 CFR 403.12 (e),(g), and (h)).

### **OPERATIONS AND MAINTENANCE (O&M)**

The proposed permit contains Special Condition S4. as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment. The proposed permit requires submission of an updated O&M manual for the entire wastewater system. The updated O&M manual is required to include a plan drawing of the entire wastewater pre-treatment system that details every integral component of the pre-treatment train.

The O&M Manual is required to be reviewed annually and any changes are to be submitted to the Department. The manual is required to have an Appendix A which is the Permittee's Industrial User Contract's Schedule A – Capacity Allocation Summary. The manual is also required to have an Appendix B which is to contain that section of the City of Grandview's Sewer Use Ordinance that details limitations on the pH of wastewater discharged [Chapter 13.12 -- Use Of Public Sewers – Discharges]. The manual is also required to include as Appendix C, the facility's Spill And Slug Discharge Prevention And Control Plan and as Appendix D, the facility's Solid Waste Control Plan.

### **PROHIBITED DISCHARGES**

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

### **DILUTION PROHIBITED**

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

## **SOLID WASTE PLAN**

The Department has determined that the Permittee has a potential to cause pollution of the waters of the State from leachate of solid waste.

This proposed permit requires, under the authority of RCW 90.48.080, that the Permittee update the Solid Waste Plan designed to prevent solid waste from causing pollution of the waters of the State and submit it to the Department. The plan must also be submitted to the local solid waste permitting agency for approval, if required by local ordinance.

The Solid Waste Control Plan is required to include at a minimum the following:

1. Contact Information described in 173-350-715(a);
2. The type of solid waste(s) generated by the facility and an estimated annual volume of each type;
3. Proposed method of storage and handling for each type of solid waste identified in (2) above;
4. Identification of any permits issued by a jurisdictional health department regarding the storage, handling, disposal, or land application of solid waste generated by the facility and identified in (2) above;
5. Submit a copy of all current Solid Waste Permits identified in (4) above.

## **SPILL AND SLUG DISCHARGE PREVENTION AND CONTROL PLAN**

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

In addition, the Department has determined that the Permittee has the potential for a batch discharge or a spill that could adversely affect the POTW; therefore, a slug discharge control plan is required (40 CFR 403.8 (f)).

The Permittee has developed a plan for preventing the accidental release of pollutants to State waters and/or the POTW for minimizing damages if such a discharge occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department as an Appendix to the updated O&M Manual. The outline of an example Spill Control Plan is given in Appendix C at the end of this fact sheet.

## **COMPLIANCE SCHEDULE WITH ENGINEERING REPORT**

The permit establishes a compliance schedule (S8.) for the Permittee to comply with State Wastewater Discharge Standards for pH given in WAC 173-216-060 Prohibited Discharges. An engineering report that develops AKART for wastewater pH for Smucker's effluent discharge to the City of Grandview WWTF is an integral part of the compliance schedule.

The Department has determined that the Permittee has violated its permit limits for pH in the existing permit to a degree that causes the Department concern about the City of Grandview's collection system. The violations are the result of inadequate neutralization equipment and/or neutralization procedures.

Smucker has reported 92 excursions with a pH less than 5.0 and 19 excursions with a pH greater than 11.0 during the period from July 2002 through October 2005. This represents 7.7 % of the days for the period in question.

The proposed permit requires the submittal of an Engineering Report for pH that establishes AKART for attaining compliance with the pH limit given in the proposed permit's S.1. The proposed permit also establishes a deadline for achieving compliance with the permit requirements for pH.

The Department will evaluate monthly discharge reports and may exercise prosecutorial discretion in response to minor violations as long as the Permittee exhibits compliance with other permit conditions and displays a good faith effort to meet the permit's Compliance Schedule for the pH treatment upgrade.

## **GENERAL CONDITIONS**

General Conditions are based directly on State laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1. requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2. requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3. specifies conditions for modifying, suspending or terminating the permit. Condition G4. requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5. requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6. prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7. and G8. relate to permit renewal and transfer. Condition G9.

requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G11. requires the payment of permit fees. Condition G12. describes the penalties for violating permit conditions.

### **PUBLIC NOTIFICATION OF NONCOMPLIANCE**

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

### **RECOMMENDATION FOR PERMIT ISSUANCE**

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. The Department proposes that the permit be issued for 5 years.

### **REFERENCES FOR TEXT AND APPENDICES**

Washington State Department of Ecology.

Laws and Regulations( <http://www.ecy.wa.gov/laws-rules/index.html> )

Permit and Wastewater Related Information  
(<http://www.ecy.wa.gov/programs/wq/wastewater/index.html>)

## APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on (date) and (date) in (name of publication) to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on (date) in (name of publication) to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator  
Department of Ecology  
Central Regional Office  
15 West Yakima Avenue, Suite 200  
Yakima, WA 98902

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the 30 day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least 30 days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within 30 days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.



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*SMUCKER FRUIT PROCESSING  
COMPANY  
EXPIRATION DATE:*

Further information may be obtained from the Department by telephone, 509/457-7105, or by writing to the address listed above.

This permit and fact sheet was prepared by Jim Leier.

**DRAFT**

## APPENDIX B--GLOSSARY

**Ammonia**—Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

**Average Monthly Discharge Limitation**—The average of the measured values obtained over a calendar month's time.

**Best Management Practices (BMPs)**--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

**BOD<sub>5</sub>**--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD<sub>5</sub> is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the Federal Clean Water Act.

**Bypass**—The intentional diversion of waste streams from any portion of the collection or treatment facility.

**Categorical Pretreatment Standards**—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

**Compliance Inspection - Without Sampling**--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

**Compliance Inspection - With Sampling**--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

**Composite Sample**—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be “time-composite”(collected at constant time intervals) or “flow-proportional” (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

**Construction Activity**—Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

**Continuous Monitoring** –Uninterrupted, unless otherwise noted in the permit.

**Engineering Report**—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

**Grab Sample**—A single sample or measurement taken at a specific time or over as short period of time as is feasible.

**Industrial User**—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

**Industrial Wastewater**—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

**Interference**— A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal and;

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits

issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

**Local Limits**—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

**Maximum Daily Discharge Limitation**—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.

**Method Detection Level (MDL)**--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

**Pass-through**— A discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

**pH**—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

**Potential Significant Industrial User**--A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

- a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;
- b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

**Quantitation Level (QL)**-- A calculated value five times the MDL (method detection level).

**Significant Industrial User (SIU)**--

- 1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;
- 2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority\* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority\* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

\*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

**Slug Discharge**—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

**State Waters**—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the State of Washington.

**Stormwater**—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

**Technology-based Effluent Limit**—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

**Total Coliform Bacteria**—A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

**Total Dissolved Solids**—That portion of total solids in water or wastewater that passes through a specific filter.

**Total Suspended Solids (TSS)**--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

**Water Quality-based Effluent Limit**—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

## APPENDIX C--EXAMPLE SPILL CONTROL PLAN

### Spill Control Plan for [company name, division and address]

Responsible Official:  
Title:  
Telephone:

Titles of persons responsible for overseeing daily implementation of plan:

Telephone numbers to call when a spill occurs

- Spill information hot line [your chemical supplier probably has an 800 number or uses a national spill information hot line)
- Fire Department
- Police Department
- Department of Ecology spills report line: CRO (Yakima) (509) 575-2490 [if the spill is hazardous waste or will not be contained within the wastewater system or will be discharged to the city sewer]
- Spill response team:
- Spill clean up contractors:

Training (who is responsible for training, who requires training, frequency)

Inventory of materials of concern

Organized by hazard class (toxic, flammable, etc.)

Organized by location (chemical storage area 1, cold storage room, laboratory, fueling station, etc.)

Spill control information:

Map of site with areas where spills are most likely to occur, drains (floor and storm), valves, pumps and switches, and other control structures to contain spills, paved areas and drainage patterns for outdoor spills, and spill containment and clean up equipment. Include sanitary and storm sewers, ditches, drains and streams on site and on adjacent property.

Procedures for managing spills (by category or location)

- ☐ Toxic (pay attention to worker safety, Hazardous waste regulations; minimize quantity lost to drain or ground)
- ☐ Flammable (control fire hazard, contain water or foam used for fire control and obtain approval of Ecology and wastewater treatment system before disposal if possible)
- ☐ High BOD strength (capture as much as possible for use as cattle feed, composting, etc.; obtain approval and discharge schedule from treatment plant before discharging to sewer; obtain approval from Ecology before land application; do not discharge to a ditch)
- ☐ Water (shut off water source; keep toxic materials out of flood; obtain approval from wastewater treatment plant or Ecology as appropriate before discharging; limit discharge rate to sewer or drain; cool hot water before discharge; neutralize chemicals used for controlling fouling if appropriate)

Elements to be included in written report submitted to Ecology following spill:

time and date of spill

person(s) responding to spill

nature of spill (type of material, amount, cause, impacts [sewer, ground, surface water])

clean up (how was accomplished, where material was disposed of)

follow up (actions which will be taken to limit potential for recurrence, improvements to response plans, etc., changes in training program)

agencies notified of spill



**APPENDIX D--RESPONSE TO COMMENTS**